UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,540	03/14/2001	Takashi Masaki	0941.65295	3816

24978 7590 02/04/2004

GREER, BURNS & CRAIN
300 S WACKER DR
25TH FLOOR
CHICAGO, IL 60606

EXAMINER	
PATEL, GAUTAM	

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 02/04/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/808,540	MASAKI ET AL.	
	Examiner	Art Unit	
	Gautam R. Patel	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3-14-01* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Amendment

1. This is in response to amendment filed on 12-22-03 (Paper # 7).

2. Claims 1-18 remain for examination.

Drawings/Objection

3. The drawings are objected for following reasons:

The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show *every feature* of the invention specified in the claims. Therefore, "A first controller" for decreasing the rotational speed and "a second controller" for increasing the rotational speed, when read or write margin becomes greater, must be shown or the feature canceled from the claim. **No new matter should be entered.**

Objection to drawings is maintained from previous office action. For reasoning see answers to remarks below, section A).

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 1 and 10 are rejected under 35 U.S.C. § 102(e) as being anticipated by Takayuki, JPO publication 2000207815 A (Abstract) (hereafter Takayuki).

As to claim 1, Takayuki discloses the invention as claimed [see Figs. 1] including decreasing the rotational speed and increasing the rotational speed, comprising the steps of:

(a) decreasing the rotational speed when a read or write margin becomes less than or equal to a first predetermined value or, when a frequency of generation of a servo abnormality [tracking error signal] of a tracking servo and/or a focus servo is greater than or equal to a first predetermined frequency [set allowable amount]; and

(b) increasing the rotational speed when the read or write margin becomes greater than or equal to a second predetermined value or, when the frequency of generation of the servo abnormality of the tracking servo and/or the focus servo is less than or equal to a second predetermined frequency [abstract].

NOTE: Takayuki uses word "reducing" [decreasing] the rotational speed when read/write margin becomes less. Second part of the claim 1 is nothing more than stating the fact that when disk is normal, it should operate at normal speed in other words, when there are defects disk should rotate at low speed when there are no defects it should rotate at "normal" or higher than the lower speed. To reach this speed one must inherently accelerate to go to normal speed, which is higher than the abnormal or low speed. Takayuki discloses "specifying the rotation speed" which inherently has mechanism to increase or decrease the speed, because specifying can be higher or can be lower.

5. As to claim 10, it is an apparatus claim corresponding to claim 1 and it is therefore rejected for the similar reasons set forth in the rejection of claim 1, supra.

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2-9 and 11-18 are rejected under 35 U.S.C. ' 103(a) as being unpatentable over Takeshita, US. patent 6,556,524 (hereafter Takeshita) in view of Takayuki as applied to claim 1 and 10 above.

As to claim 2, Takeshita discloses the invention as claimed [see Figs. 1-5D], including a test write process and controlling optimum write power comprising the steps of:

steps (a) and (b) respectively control the rotational speed depending on a result of at least one of a test write process and a learning process which is carried out with respect to a read or write process [col. 6, line 35 to col. 7, line 23];

Takeshita discloses all of the above steps, including controlling rotational speed depending upon the test write process. Takeshita does not specifically discloses frequency of generation of servo abnormality of tracking or focus servo to the extent claimed.

However, it is well known in the art that most modern system does accumulate some kind of error signals and also check frequency of the errors to see how good or bad the original disc is and how to control speed on the basis of frequency of errors and store that information in table or memory. Also Takayuki clearly discloses:

checking for a tracking error signal and compare it to a preliminary set allowable amount [threshold or value] [abstract].

Both Takeshita and Takayuki are interested in improving the rotational control method of a disc, both are monitoring tracking error and or focus error in their systems.

One of ordinary skill in the art at the time of invention would have realized that vibrations, errors or abnormality needs to controlled in a system and a t the same time

reduction in the manufacturing cost and thinning of the device are advantageous things to have in a system. Therefore, it would have been obvious to have used a error signal monitoring which controls the speed of the motor in the system of Takeshita as taught by Takayuki because one would be motivated to reduce the cost of the system and also make device thinner thus saving money and space.

8. As to claim 3, Takeshita discloses:

said step (a) detects that the read or write margin is less than or equal to the first predetermined value when an optimum write power of a light source with respect to the optical recording medium obtained by the test write process exceeds a reference value; and

said step (b) detects that the read or write margin is greater than or equal to the second predetermined value when a margin greater than or equal to a predetermined value exists with respect to the reference value [col. 8, line 6-53].

9. As to claim 4, Takeshita discloses:

said step (a) decreases the rotational speed [fig. 3, step S26] when a read error rate improves at a write power exceeding an upper limit value of a write power obtained by the test write process or the learning process [col. 8, lines 6-53.

10. As to claim 5, Takeshita discloses:

said step (b) increases the rotational speed when the optimum write power obtained by the test write process or the learning process has a sufficient margin with respect to an upper limit value of the write power [col. 9, line 43 to col. 10, line 17 and figs 5A-5D].

11. As to claim 6, Takeshita discloses:

(c) counting up a number of times a judgement is made to decrease the rotational speed by said step (a) and counting down a number of times a judgement is made to increase the rotational speed by said step (b), and enabling said step (a) when

a count reaches an upper limit value and enabling said step (b) when a lower limit value is reached [col. 8, lines 6-36 and col. 9, lines 9-36 and Table 1].

12. As to claim 7, Takeshita discloses:

7. said step (c) counts a number of judgements made based on a result of a test write process with a weighting larger than a number of judgements made based on a result of a learning process which is carried out with respect to a read or write process [col. 8, lines 6-36 and col. 9, lines 9-36 and Table 1].

13. As to claim 8, Takeshita discloses:

(c) measuring an amount of eccentricity of the optical recording medium, said step (a) detecting that the read or write margin is less than or equal to the first predetermined value when the measured amount of eccentricity exceeds a reference value [col 6, lines 9-32 and col. 8, lines 6-36].

14. As to claim 9, Takeshita discloses:

(c) measuring an amount of eccentricity of the optical recording medium, said step (a) switching a value of the first predetermined frequency depending on the measured amount of eccentricity [col 6, lines 9-32 and col. 8, lines 6-36].

15. As to claims 11-18, they are apparatus claims corresponding to method claims 2-9 respectively and they are therefore rejected for the similar reasons set forth in the rejection of claims 2-9 respectively, supra.

Takayuki and Takeshita were cited as prior art references in paper no. 6, mailed 10-10-03.

16. Applicant's arguments filed on 12-22-03 (Paper # 7). have been fully considered but they are not deemed to be persuasive for the following reasons.

17. In the REMARKS, the Applicant argues as follows:

A) That: "Both the first and second controller are, in fact, shown in Fig. 1 as MPU 12, which performs the functions of first and second controller. This is described in the specification in connection with the flow charts of Figs. 12-15, for example. Accordingly, Applicants respectfully submit that corrections to the drawings are not necessary." [page 10, para. 3; REMARKS].

FIRST: Close examination of fig. 1, or any other figure shows that MPU 12 does not contain any controller, much less a first and second controller performing two different functions.

SECOND: Specification itself does not discloses any controller or that these controllers are part of the MPU 12. It seems the Applicants are trying to add new matter in terms of new definition of these first and second controllers.

THIRD: the figures 12-15 that are referred by the Applicants as containing these controllers is not found persuasive at all, because first of all these figures are method steps NOT an apparatus drawing. The Applicants are claiming in their apparatus claim these two controllers which directly or indirectly does not exist. The only thing the specification eludes to is that MPU 12 controls speed.

For the above reasons objection to drawings stands as before.

B) That: "the cited reference [Takayuki], does not discloses or suggest at least the feature for increasing the rotational speed of an optical recording medium as in the present invention." [page 10, para. 4; REMARKS].

FIRST: Inherently ALL disk are at stand still before any start up operation on the disk begins. Therefore by definition speed has to be increased to certain level until a threshold [preliminary set allowable amount] is reached.

SECOND: When this threshold is exceeded, speed must be reduced to avoid vibration. Now if speed keeps reducing only and it does not go back to normal speed pretty soon disk will stop rotating at all. Therefore by definition whatever "problem" that caused the speed to reduce to a lower level is gone, inherently speed must be increased back to normal speed for proper operation. In short second part of claim 1 is

nothing more that description of how a normal disk operates and is amirror image of part one.

C) That: "Takayuki does not disclose or suggest, expressly or inherently, the features for increasing the rotational speed when the read wrote margin becomes greater than or equal to a second predetermined value ..". [page 11, para. 1; REMARKS].

FIRST: See arguments in NOTES under claim 1 and para. 17, section B), supra.

SECOND: In paragraph [007] of the Takayuki reference it states that, "the aforementioned roll control means carried out [the spindle motor/aforementioned] starting doe not reach within the appointed time even at specification rotational speed, it is characterized [other] by judging it as that to which the aforementioned optical disk is vibrating etc.". in other words not only Takayuki clearly discloses the acceleration [increasing speed] but also defines second criteria in terms of time.
NOTE: Paragraph quoted for translation of the text from the Takayuki patent 207815.

D) That: "The Takeshita reference merely proposes an optimum power control which changes the recording speed and the laser power level. It does not discloses or suggest the features discussed above that are missing form the Takayuki reference." [page 12, para. 2; REMARKS].

Takayuki was used for this limitation NOT Takayuki, so obviously Takeshita does not show these limitations.

18. **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO **EXPIRE THREE MONTHS** FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED

STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Contact information

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.

2/3/04

DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Gautam R. Patel
Patent Examiner
Group Art Unit 2655

January 27, 2004